

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A method of controlling a storage system having primary storage volumes and replication storage volumes, ~~for improving reliability of the storage system,~~ the method comprising:

determining a plurality of failure boundaries in the storage system, each failure boundary identifying a portion of the storage system that will be affected by a type of storage failure, one of the plurality of failure boundaries being determined using at least one of error correction group and controller group information of the primary storage volumes and replication storage volumes to divide the storage volumes into failure groups of logical volumes; and

using the plurality of determined failure boundaries and a type of content to be stored to assign replication storage volumes,

wherein a first type of content to be stored has replication storage volumes assigned across each failure boundary, such that at least some of the replication storage volumes are located outside the respective failure boundary for any of the types of storage failure used to determine the plurality of failure boundaries, and

wherein a second type of content is able to be stored having replication storage volume within at least one failure boundary.

2. (Previously Presented) A method as in claim 1 wherein each failure boundary is determined by software managing the storage system.

3. (Previously Presented) A method as in claim 2 wherein a logical address of locations in the storage system is used to determine a failure boundary.

4. (Canceled)

5. (Previously Presented) A method as in claim 1 wherein information regarding the failure boundaries is stored in a server.

6. (Original) A method as in claim 5 wherein the information regarding the failure boundaries is stored as a table in the server.

7. (Original) A method as in claim 5 wherein information regarding the failure boundaries also includes information about reliability of the primary storage volumes and the replication storage volumes.

8. (Previously Presented) A method as in claim 1 wherein at least one failure boundary is used to assign storage volumes as replication storage volumes for a particular operation of the storage system.

9. (Canceled)

10. (Currently Amended) A storage system comprising:
a set of primary storage volumes;
a set of replication storage volumes ~~for improving reliability of the storage~~
~~system;~~

a memory for storing information regarding a plurality of failure boundaries in the storage system, each failure boundary identifying a portion of the storage system that will be affected by a type of storage failure, one of the plurality of failure boundaries being determined using at least one of error correction group and controller group information for the set of primary storage volumes and the set of replication storage volumes to divide the storage volumes into failure groups of logical volumes; and

a controller coupled to the memory for assigning replication storage volumes using the plurality of determined failure boundaries and a type of content to be stored,

wherein a first type of content to be stored has replication storage volumes assigned across each failure boundary, such that at least some of the replication storage volumes

are outside the respective failure boundary for any of the types of storage failure used to determine the plurality of failure boundaries, and

wherein a second type of content is able to be stored having replication storage volume within at least one failure boundary.

11. (Previously Presented) A storage system as in claim 10 wherein the memory is in a server and the server is used to manage the storage system.

12. (Original) A storage system as in claim 11 wherein the information regarding the failure boundaries is stored as a table.

13. (Original) A storage system as in claim 11 wherein information regarding the failure boundaries also includes information about reliability of the primary and replication storage volumes.

14. (Original) A storage system as in claim 11 wherein information regarding the failure boundaries also includes information about performance of the primary and replication storage volumes.

15. (Previously Presented) A method as in claim 1 wherein a failure boundary is determined based on logical addresses.

16. (Previously Presented) A method as in claim 15 wherein the logical addresses correspond to volume numbers or error correction groups.

17. (Previously Presented) A method as in claim 1 further comprising:
performing a replication process between the primary replication volumes and secondary storage volumes, the replication process utilizing a daily or hybrid backup implementation.

18. (Previously Presented) A storage system as in claim 10 wherein a failure boundary is determined based on logical addresses.

19. (Previously Presented) A storage system as in claim 18 wherein the logical addresses correspond to volume numbers or error correction groups.

20. (Previously Presented) A storage system as in claim 10 wherein the controller further performs a replication process between the primary replication volumes and secondary storage volumes, the replication process utilizing a daily or hybrid backup implementation.

21. (Previously Presented) A method as in claim 1 wherein the primary storage volumes and replication storage volumes are horizontally or are vertically addressed.

22. (Previously Presented) A storage system as in claim 10 wherein the primary storage volumes and replication storage volumes are horizontally or are vertically addressed.

23. (Previously Presented) A method as in claim 1 wherein the first type of content to be stored is a full backup of data and the second type of content to be stored is a differential backup of data.

24. (Previously Presented) A storage system as in claim 10 wherein the first type of content to be stored is a full backup of data and the second type of content to be stored is a differential backup of data.